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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/719,148	12/08/2000	Guillaume Bichot	PF980074	5718

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EXAMINER

KLINGER, SCOTT M

ART UNIT PAPER NUMBER

2153

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/719,148

Applicant(s)

BICHOT ET AL.

Examiner

Scott M. Klinger

Art Unit

2153

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-8 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Art Unit: 2153

DETAILED ACTION

Claims 1-8 are pending.

Claim 8 is new.

Response to Arguments

Note: Applicant's remarks are in **bold** type, and the examiner's responses are indented

However, Applicants submit that cited portion of Strecker has been misinterpreted, and that the memory buffer taught in Strecker does not appear to be of the same nature as the message buffer recited in the present claims. Strecker specifically mentions that the memory buffer refers to a buffer in the actual memory of a node, and NOT to a communications buffer interfacing between the communication bus and the other elements of a node (col. 3, line 67 - col. 4, line 5).

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "*a communications buffer interfacing between the communication bus and the other elements of a node*") are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In the passage cited by the Examiner, a first node desiring to send information to a second node will split that information into the payload of several packets. Each packet includes an offset within the second node's memory where the payload of the given packet is to be written. Thus, the packets sent by the first node are essentially write messages in specific memory areas of the second node.

By contrast, the claimed invention is entirely different. According to the invention, the first device allocates a message buffer size to a connection with a second device, and the second device adapts the payload size in the packets it sends to the first node as a function of this message buffer size, which was previously transmitted by the first device.

Strecker does not disclose or suggest such a relationship between the payload size of a packet and the memory buffer size in the receiver.

In the system of Strecker, if the message buffer size were smaller than the size of the packets, the data transfer would not be complete. It is inherently implied that the packets are smaller or equal to said message buffer size.

Strecker shows that there is a predetermined maximum datagram size: “(39) *All ports provide bi-directional, general purpose datagram service. Nodes must be able to handle a predetermined minimum datagram text length. In this example, that minimum is 58 bytes. Larger values up to some predetermined maximum, such as 4089, bytes may be used between ports based on prior agreement. The prior agreement on increased size limits is left to a higher level protocol.*” (Strecker, col., lines)

It is inherently implied that the buffers would be big enough to handle a packet sending the maximum payload.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Strecker et al. (U.S. Patent Number 4,777,595, hereinafter "Strecker"). Strecker discloses an apparatus for transferring blocks of information from one node to a second node in a computer network. Strecker shows,

In referring to claim 1,

- Opening a connection between said first device and said second device; having said second device allocate a message buffer to said connection, said second device communicating the message buffer size to said first device:

"Prior to a transfer, the names, offsets and lengths of buffers in other nodes are determined and exchanged through higher level protocols. The message packets of the present invention reference only the name, length (in bytes) and offset (i.e., location relative to the starting address of the buffer) into the buffer. Offset mapping is also implementation-dependent." (Strecker, col. 4, lines 9-15)

- Having said first device transmit said data packet to said second device, wherein said data packet is split and sent as payload in messages, where the size of the payloads is smaller or equal to said message buffer size:

"To write data from a first node to a second node, the first node puts an appropriate number of so-called SNTDAT packets onto the communications bus, each containing a part of the data and labeled with the name of the destination (i.e., receiving) buffer in the second node and the offset in the receive buffer for that particular packet. A transaction identifier unique to the group of packets also is transmitted, for use in the message confirmation process." (Strecker, col. 4, lines 16-24)

In referring to claim 2

- Said payloads have a first maximum length independent of said first and second devices:
A maximum transmission unit (MTU) is inherently implied in a packet switching network

Art Unit: 2153

- A second maximum length dependent of said second device is constituted by said message buffer size, the shortest of said first and second maximum lengths being retained for sending messages to said second device:

"Data packet length is discretely variable. All the packets of the transfer except the last should be of an agreed-upon size and the last packet should carry the remainder and be less than or equal to the preceding packets in size." (Strecker, col. 5, lines 41-45)

A system that has nodes with different buffer sizes and a MTU based on the network, using the smallest of these sizes to send data packets is inherently implied

In referring to claim 3,

- Said connection is opened by said first device through a function call sent to said second device for writing data to said second device:

"To minimize the number of host interrupts, commands can be generated in the receiving port automatically, responsive to a basic command from the sending port, as in the case of generating a confirmation message or performing a READ operation." (Strecker, col. 5, lines 3-7)

In referring to claim 4,

- Said connection is opened by said second device through a function call sent to said first device for reading data from said first device:

Strecker, col. 5, lines 3-7 (see full quote above)

In referring to claim 5,

- Said first device comprises at least one data storage element for storing said data packet:
Strecker, Fig. 1 shows the first device 14 has a data storage element 25A

Art Unit: 2153

In referring to claim 6,

- Said device comprises more than one storage element, each of said storage elements being identified by an identifier:

Strecker, Fig. 1 shows the first device 14 has data storage elements **25A** and **25B**

In referring to claim 7,

- Said second device comprises at least one data storage element for storing said data packet:

Strecker, Fig. 1 shows the second device 16 has a data storage element **24C**

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Strecker in view of Muller et al. (U.S. Patent Number 6,021,132, hereinafter "Muller"). Although Strecker shows substantial features of the claimed invention, Strecker does not show the buffers are dynamically allocatable. Nonetheless this feature is well known in the art and would have been an obvious (addition/modification) to the system disclosed by Strecker as evidenced by Muller.

In analogous art, Muller discloses a shared memory management in a switched network element. Muller shows: *"The shared memory manager dynamically allocates buffers on behalf of the input ports and tracks ownership counts for each of the buffers based upon information provided by the input ports and the output ports."* (Muller, col. 2, lines 49-52)

Given these teachings, a person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system of Strecker so as to dynamically allocate

Art Unit: 2153

memory to the memory buffer, such as taught by Muller, in order to efficiently allocate memory to operations that need it.

Conclusion


THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott M. Klinger whose telephone number is (703) 305-8285. The examiner can normally be reached on M-F 7:00am - 3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Burgess can be reached on (703) 305-4792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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